

GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH
RAJYA SABHA
UNSTARRED QUESTION No. 3157
(ANSWERED ON. 27.03.2025)

INTERNATIONAL YEAR OF MILLETS

3157# Shri Deepak Prakash:
Smt. Kiran Choudhry:
Shri Subhash Barala:

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

- (a) the contribution made by Council of Scientific and Industrial Research (CSIR) in popularizing millets and engaging in millets research during the International Year of Millets; and
- (b) the amount earmarked by CSIR for millets research?

ANSWER

MINISTER OF STATE (INDEPENDENT CHARGE) FOR THE
SCIENCE AND TECHNOLOGY AND EARTH SCIENCES

(DR. JITENDRA SINGH)

- (a) CSIR-Central Food Technological Research Institute, Mysore - a constituent laboratory of the Council of Scientific & Industrial Research (CSIR) has been carrying out research work on millets, covering both basic and applied research. The institute is carrying out extensive research work on millets under different verticals such as establishing the health benefits, processing of millets for value addition, developing different products and technologies on millets including machinery development.

The significant initiative undertaken by CSIR in popularizing millets and engaging in Millet research during the International Year of Millets is as under:

- CSIR has launched a mission project on Millets with the following objectives:
 - Nutritional profiling of 100 varieties of millets
 - Promotion of region-specific millet products
 - Shelf life enhancement of the millet's products
 - Global awareness of health and nutritional attributes of millets

CSIR-CFTRI is the nodal laboratory and nine other CSIR laboratories are participating in this mission mode project.

- Around 130 varieties of millets collected from various millet growing areas of the country have been analysed for nutritional composition, nutraceutical value, bio accessibility of minerals like calcium, iron and zinc, protein and starch digestibility, amino acid composition, lipid profile, available lysine and antinutrients like phytic acid, oxalic acid, trypsin inhibitors. Released varieties popularly grown, hybrids, biofortified varieties and varieties from the tribal regions were collected for the analysis. The data for each variety was compiled in the form of book titled "Millets of Bharath vol 1" which was released in

October 2024. This study will identify millets with a better nutritional profile which will be popularized. Further selected varieties were subjected to processing like refining, popping, malting etc to understand the status of the nutrients and antinutrients.

- The survey on millet consumption pattern was conducted in urban, rural and tribal cohorts of Karnataka, Telangana, Maharashtra, Odisha and western Himalayan millet growing and consuming regions. During the survey around sixty recipes for millet based traditional foods were collected. These foods were prepared in the laboratory and the nutritional profile along with eGI has been determined in the laboratory. The millet based traditional foods along with the nutritional profile is being compiled in the form a compendium.
 - Two millet based products namely *Siddu* and nuggets have been identified Poshan abhyan and MDM programs to tackle malnutrition in the Himalayan region.
 - To promote health benefits of millets convenience products like beverage from millets for menu diversity and palatability for targeted population with xerobiotic, spice bioactives and indolamines. Apart from beverages Ready to eat products like millet noodles and semolina have been developed.
 - Large scale extraction of Edible oil from millet bran has been achieved.
 - Block Chain Technology for Millet Supply Chain and Life Cycle Assessment for ragi in Kerala is completed and the survey is being extended to other states like Karnataka and Tamil Nadu.
 - Bio-degradable cutlery using the milling by-product from millet milling have been developed. Edible cutlery from finger millet has also been developed paving the way for innovation in circular economy in millet processing.
 - Formulation quality animal fodder from delignified cellulose from millet by-products with added nutrition and better digestibility has been developed.
 - Sensors for the detection and quantification of gluten content in millet based products have been developed. Sensors for the detection of mycotoxins has also been developed.
 - New formulation of Pheromones against stored pests was evaluated and the preparation at an industrial scale is completed and tested.
 - Co-fumigation System (Biofumigants & Ozone) for prevention of stored grain pests of Sorghum and Pearl millets.
 - Capacity building and training including mentoring of start-ups in millets are also taken up for popularizing millets. Write –ups in magazines, broadcasts about Millets in All India Radio, Two live telecast to Doordarshan.
 - CSIR-CFTRI also Co-organized two conferences TRIMSAFE-9th IFCON, Millets for achieving Nutritional and economic security.
 - As part globalization and popularization of millet products a multi- millet bun with 5 millets was developed co-partnering with Mc Donald’s which was launched on 4 Sept. 2023.
- (b) CSIR has earmarked/allocated Rs. 19.00 crores for the Millet Mission project for a period of 2 years (2023-2024 to 2024-2025).
